ABSTRACT OF THE DISCLOSURE

This invention pertains to BIV constructs encompassing BIV combination vectors, BIV vectors and BIV packaging vectors and particularly the invention pertains to a three vector system comprising: a) a BIV vector construct including a DNA segment from a BIV genome, a packaging sequence to package RNA into virions; a promoter operably linked to the DNA segment; and a transgene operably linked to a second promoter; b) a BIV packaging vector construct comprising a BIV DNA sequence fragment comprising at least a gag gene or pol gene of BIV; a promoter operably linked to the BIV DNA fragment; and a polyadenylation sequence located downstream of the BIV DNA fragment; and c) an expression vector construct comprising a gene encoding a viral surface protein. Also provided is a method for transferring a gene of interest into a mammalian cell.